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# Safeguards implementation during the COVID-19 Pandemic

*Report by the Director General*

## Summary

- This document reports on the measures taken by the Agency to continue to implement safeguards effectively during the COVID-19 pandemic.
- At the outset of the pandemic, the Director General stated that, despite the difficult situation, the Agency's verification activities would not be interrupted. As a consequence, a series of mitigating actions were immediately implemented, drawing from business continuity and disaster recovery measures already in development.
- The Agency has been able to conduct all of its most time-critical safeguards in-field verification activities, while rescheduling a number of activities, such as equipment installation and maintenance and verification activities that could be postponed without impact, to be completed over the course of the remainder of 2020.
- The Agency is identifying adjustments that will be necessary to make in the second part of the year in regards to the operational conduct of safeguards activities at Headquarters and in the field. The Agency will continue to rely on the essential cooperation of States to implement safeguards, including to support any required increase in the frequency and intensity of originally planned activities for the remainder of 2020.
- Most safeguards activities that are normally carried out at Agency Headquarters and at its regional offices have continued to be delivered.
- Contribution from the Agency's regional offices have been particularly instrumental for our capability to continue Agency safeguards activities.
- The Agency has continued to recruit and train staff, with some adjustments.
- States' national authorities and other relevant national entities have played a very important role in supporting the Agency's work, including by ensuring the Agency's continued access to nuclear facilities, movement across borders and transfers through airports. Continuation of this support will be essential for the duration of the COVID-19 pandemic.

- The Agency currently assesses that it will be able to draw soundly-based safeguards conclusions at the end of the year for all States, providing that it continues to receive all necessary cooperation and support from those States.

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## **A. Introduction**

1. The impact of the COVID-19 pandemic has been far-reaching. Governments around the world have adopted and implemented strict health and safety related measures for the containment of the coronavirus, such as social and physical distancing measures, restricting inbound and outbound travel and free movement of people, grounding flights and restricting other travel means, and closing borders. These measures have had a significant impact on the Agency's implementation of safeguards, in particular the conduct of a number of its planned in-field verification activities, requiring measures to be taken to overcome the challenges.
2. This document reports on the measures that the Agency has taken so far, to continue to implement safeguards effectively during the pandemic in order to be able to draw soundly-based safeguards conclusions.

## **B. Safeguards implementation**

3. To achieve its safeguards objectives for a State, the Agency needs to implement safeguards activities for the State in accordance with its safeguards agreement and, as applicable, the additional protocol, to provide credible assurance that the State is abiding by its safeguards obligations. The frequency and intensity of safeguards activities is determined in accordance with the safeguards agreement, taking into account the State's nuclear fuel cycle and related technical capabilities, the type of nuclear material, and other State specific factors.<sup>1</sup>
4. Each year, the Agency prepares an annual implementation plan (AIP) for each State with a safeguards agreement in force which specifies the in-field and Headquarters safeguards activities to be conducted, and the frequency and intensity with which they are to be implemented, to attain the safeguards technical objectives.<sup>2</sup> If a planned activity cannot be conducted, or if a safeguards technical objective is not attained or an inconsistency is found, the AIP may be adjusted and follow up activities are planned and conducted in cooperation with the State or regional authority, as appropriate.

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<sup>1</sup> See GOV/2014/41 and Corr.1, Sections C.5 and C.6.

<sup>2</sup> See GOV/2014/41 and Corr.1, Section C.4.

## C. State responses to COVID-19

5. The measures introduced by a significant number of States, and the correlating impact to safeguards, in response to COVID-19 can be summarized as follows:

- **Flight restrictions:** severe commercial flight restrictions on the vast majority of routes, resulting in cancellations of nearly all flights has meant that many States are much harder to reach, and some are not currently reachable via commercial flights.
- **Travel across State borders:** the introduction of strict immigration measures such as only allowing entry to citizens and residents of the State concerned has meant that some States are harder to access for non-residents.
- **In-country restrictions:** the introduction of restrictions, including on the movement of people and availability of other services such as hotel accommodation and food outlets within the country's territory has meant limited movement, accommodation and other services available for Agency inspectors and technicians.
- **Access restrictions to Agency offices and laboratories:** in addition to the Director General's instructions for Agency personnel in Vienna and Seibersdorf to work from home, similar measures were requested by Japan with respect to the Agency's regional office in Tokyo and by Canada with respect to the Agency's regional office in Toronto.
- **Access restrictions to State facilities and sites:** the closure or introduction of strict access restrictions at nuclear facilities or sites has meant that some facilities or locations outside facilities (LOFs) are unavailable or harder to access for Agency inspectors and technicians to conduct in-field safeguards activities.
- **Health and safety requirements:** the introduction of quarantine restrictions, requirement of appropriate personal protective equipment (PPE) which was in short supply worldwide, and medical testing requirements upon arrival in the State concerned and before accessing nuclear facilities varied between States and changed at short notice.<sup>3</sup>

## D. Impact on safeguards implementation and Agency responses

6. Despite these circumstances, the Agency continued to pursue its verification mission to deter the spread of nuclear weapons through the early detection of the diversion of nuclear material and the misuse of nuclear technology.

7. The measures introduced by States in response to COVID-19 have had an impact on planning and implementing Agency safeguards activities, in particular those in the field. The Agency, in turn, took a number of actions and has introduced a number of measures to mitigate this impact as much as possible.

### D.1. Business continuity measures

8. The Agency is committed to the resilience of its critical operations and ensuring that it can implement its legal obligations under relevant safeguards agreements, carry out other verification

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<sup>3</sup> The Agency staff, including inspectors, are required to observe the health and safety rules and regulations of the host State, whether in the field or at Agency Headquarters and regional offices.

activities, and make safeguards-relevant information available on a secure basis, even during a disruptive event. Drawing from business continuity and disaster recovery measures already in development, some of the immediate actions taken by the Agency between 16 March 2020 and as of the date of this report in order to mitigate the effects of the pandemic on safeguards activities included:

- Prioritizing critical safeguards and other verification activities: initially for four weeks from 16 March 2020, and reassessing them periodically thereafter;
- Completing ongoing inspection-related work, to the extent possible, prior to the initiation of the Agency remote working arrangements, and storing of safeguards equipment and PPE outside the premises, to ensure they are readily available to inspectors and technicians;
- Establishing a temporary centralized capability within the Office of the Deputy Director General and Head of the Department of Safeguards to review and monitor scheduled in-field verification activities on a daily basis;
- Completing systematic PCR testing, with support from the VIC Medical Services, for all Agency inspectors and technicians prior to travel to avoid quarantine and comply with State regulations;
- Ensuring that Agency staff were equipped with the necessary IT capabilities to enable secure remote working for an extended period and were able to securely communicate with one another.

9. The ever-evolving global travel restrictions and health and safety measures have presented various challenges. Access to consistent and up-to-date information about frequently changing restrictions and measures posed a particular challenge when planning in-field verification activities. Close collaboration with the Host State, the Republic of Austria, and with other States was essential to overcome these operational obstacles.

## **D.2. In-field verification activities**

10. Travel and in-country restrictions have made it harder for the Agency to reach a large number of nuclear facilities, sites and other locations. There have been numerous examples of Agency inspectors and technical staff making extraordinary efforts to fulfil their duties, for example, by isolating for up to 14 days in their destination State, driving long distances and crossing various national borders to conduct an inspection instead of flying, and embarking on missions without knowing in advance how or when they would return to Vienna. Massive coordination efforts were required at the Agency Headquarters to accommodate such restrictions.

11. In response to the unavailability of many commercial flights, the Agency has, for the first time in its history, concluded contracts for the provision of aircraft charter services to transport inspectors and technical staff to and from States, using extra-budgetary support provided by France, Germany, United Kingdom and United States of America. This arrangement has already been used successfully to transport 78 Agency staff to conduct inspections in four States.

12. In light of such restrictions, the Agency has adapted AIPs by focusing its inspection effort on achieving the most time-critical and time-bound safeguards objectives and, where appropriate, rescheduling inspections and complementary accesses, and planning compensatory measures such as remote monitoring to maintain continuity of knowledge and minimize the future impact of any delayed activities. Despite the difficulties, the Agency has been able to conduct all of its most time-critical

safeguards activities and, most importantly, achieved all of the most time-critical safeguards objectives over this period.

13. During the period between 1 March and 31 May 2020, the Agency conducted 274 inspections, 29 design information verifications (DIV) and 16 complementary accesses (CAs). These activities involved over 1 000 days of inspectors' verification effort and over 3 000 days spent in the field by inspectors and technical staff.<sup>4</sup>

14. The availability of the resident Agency staff at the Agency's regional offices in Tokyo and Toronto has meant there have been fewer difficulties in safeguards implementation in the States where those offices are located than in other States, where no such offices are located.<sup>5</sup> The regional offices have been instrumental for our capability to continue most of the IAEA verification activities, providing for 71 inspections, 15 DIVs and 2 CAs during the period of 1 March to 31 May 2020.

15. The introduction of COVID-19 travel, required quarantines, and in-country restrictions has prevented the Agency from conducting some routine inspections with short notice or without advance notice in a few countries as well as some CAs, the implications of which the Agency is currently assessing and will seek to address as part of its rescheduling of verification activities for the remainder of the year.

16. All safeguards equipment requests from within the Department have been processed, including the provision of verification equipment and PPE to Agency inspectors and technicians prior to departing for verification activities. The Agency's investment in remote monitoring systems over the past two decades has proved invaluable during the pandemic situation, with more than 1 700 data streams continuing to deliver safeguards equipment data from facilities in 30 States<sup>6</sup> to the Agency Headquarters. As of 31 May 2020, 21 trips related to the technical and scientific support for inspections and 22 trips related to maintenance or installation of safeguards equipment are being rescheduled to the next possible opportunity as a consequence of nuclear facilities having suspended routine work or deferred non-essential activities. As facilities that are currently closed resume operations, the Agency will have to clear a backlog of deferred equipment installations and maintenance work. Despite the conditions, contracted and in-house equipment developments continued to progress significantly.

### **D.3. Verification activities at the Headquarters**

17. Overall, the outcomes of the activities that are normally carried out at Agency Headquarters and in the regional offices have continued close to what was expected before the impact of the COVID-19 pandemic, though some delays are expected. This is a result of substantial adjustment of some processes and workflows. Overall, information analysis and associated interactive teamwork by Agency staff have continued; the processing of State reports and declarations and associated feedback were performed as per the Agency's related obligations; the evaluation of nuclear material balances and the evaluation of analysis of environmental sample results has been maintained at close to normal levels; and the Agency has continued to collect, process, evaluate and internally provide other safeguards-relevant information, such as open source information, including satellite imagery.

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<sup>4</sup> While this data is accurate for the period described, it should not be considered indicative for the whole of 2020 or comparable to figures for this time period in 2019. Such statements and activities are based on annual implementation plans and should be considered on an annual basis.

<sup>5</sup> Approximately 24% of annual inspections are conducted in these two States.

<sup>6</sup> And Taiwan, China

18. State evaluation and the development of new State-level safeguards approaches (SLAs) has continued, albeit at a reduced pace, as a result of the decision to maintain the security of highly confidential information. While some of the work has been conducted by Agency staff remotely, using, inter alia, a newly-deployed secure IT solution, the drafting of State evaluation reports (SERs) and development of SLAs largely needs to be carried out within the highly secure, integrated safeguards environment (ISE), accessible only at the Agency's premises in the VIC. In addition, the work related to the preparation of inspections such as equipment preparation and handing over to the travelling staff, equipment contamination check and seals verification can be done only with staff presence at the Agency's premises in the VIC. Hence, a limited number of Agency staff have been authorized to access the VIC to carry out such work. Overall, the Agency has accepted reduced efficiency at Agency Headquarters in order to maintain the security of highly confidential information.

19. Progress on the Departmental project aimed at improving the development of SLAs using a structured approach, as described in the Safeguards Implementation Report (SIR) for 2019,<sup>7</sup> has continued uninterrupted, although with some delay.

20. The Agency has continued to provide statements on the activities and results of its in-field verification activities to relevant States: in the period between 1 March and 31 May 2020, the Agency submitted 167 statements on inspection results (90(a) statements or equivalent), 159 statements on the conclusion drawn from its inspections (90(b) statements or equivalent) and 70 DIV acknowledgement letters, and 3 statements on CAs (10(a) statements).

21. At Seibersdorf (Austria) and Rokkasho (Japan), the Agency's safeguards laboratories remain safe, secure and in good operating condition. All requests from inspectors for environmental sample kits are being met. The processing of any new nuclear material samples has been suspended due to restrictions on the number of Agency staff permitted in the Seibersdorf laboratories. The large geometry secondary ion mass spectrometer (LG-SIMS) for environmental samples has continued operating, albeit only at minimal capacity. The laboratories continue to receive most inspection samples for analysis from the field and to dispatch samples to the network of analytical laboratories (NWAL), although most members of the NWAL have also suspended the processing of new samples.

#### **D.4. Health, safety and welfare**

22. While a number of Member States were willing to provide financial assistance to the Agency to purchase PPE, the global PPE shortage became a critical issue. The Agency continues efforts to identify possible suppliers and it is hoped that a longer-term commitment to satisfy the Agency's needs is provided through the standard Agency procurement process. The shortage of the FFP3-type masks is most critical, due to its necessity for inspections because of the high-level of protection, which is being addressed. The Agency is using its existing PPE stocks procured or manufactured onsite since the onset of the pandemic and in parallel has identified Austrian suppliers that have partially addressed some of the current needs.

23. COVID-19 health and safety measures in some States, involving quarantine requirements, have necessitated Agency inspectors spending longer periods in the respective country, but in other States such restrictions have not been applied to facilitate the Agency's continued implementation of safeguards, or have been avoided through submission of negative test results for COVID-19 upon arrival in the respective country. The support provided by the VIC Medical Services, including the availability of testing, and, more recently, the commercial availability of testing at Vienna airport and other laboratories in Vienna, has enabled Agency staff to be tested before and after duty travel. This has

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<sup>7</sup> GOV/2020/9, paras 115 and 116.

allowed those staff to test and immediately resume work at Agency Headquarters without the need for quarantine when negative.

## **D.5. Recruitment and training**

24. The Agency has continued to recruit staff, including recently 21 new inspectors. Two Introductory Courses for Agency Safeguards (ICAS) for the new inspectors were put back by one month, and were re-designed to integrate remote learning to mitigate risks of COVID-19 transmission and to adhere to the recommendations of the VIC Medical Services. Pending the start of their formal training, the Agency began to prepare the inspectors for their work by launching an on-line portal on the Agency's learning management system. For existing staff, training courses have been rescheduled or modified to be delivered remotely.

## **D.6. Assistance to States**

25. With regard to training provided to States, four SSAC courses, originally planned to be held before the end of June, are being rescheduled. The Agency is working to develop alternative means to deliver safeguards related training and assistance to Member States, including by increasing the availability of on-line resources and by developing remote learning modules. The Safeguards Traineeship Programme has been redesigned to engage the trainees through remote presentations, assignments and workshops.

## **E. Operational adjustments**

26. The Agency is identifying the operational adjustments that it needs to make to AIPs to compensate for the originally planned activities it has not been able to carry out in the field in the first part of the year. These operational adjustments may include increased frequency and intensity of in-field verification activities during the second half of 2020. The Agency has identified and planned essential safeguards activities in the field for the coming months, on the basis of current travel restrictions, and will regularly review these plans to take account of any extraneous changes. All containment and surveillance measures have remained in place and all remote monitoring equipment has operated normally. Analysis of inspection results and State evaluation of safeguards relevant information has continued – with work on highly confidential information still being conducted at Headquarters.

27. A gradual return to working at full capacity at the VIC and the safeguards analytical laboratories in Seibersdorf was put into operation on 15 May 2020. The gradual return of staff to regional offices in Tokyo and Toronto will be put into operation in accordance with local regulations.

## **F. Role of States**

28. The Agency's interactions with Member States' Missions in Vienna and with their national authorities have played a very important role in ensuring the Agency's continued access to nuclear facilities, movement across borders and transfers through airports. Specific examples include accepting COVID-19 test results in lieu of undergoing quarantine and facilitating flight clearances when airspace is otherwise closed. The Agency is grateful for the support received from all States in their interactions with Agency staff at Agency Headquarters and for Agency inspectors and technicians in the field.

29. The Agency has experienced cases where access to facilities by inspectors was temporarily suspended or some facilities were closed during this period. In many instances, in-country COVID-19

restrictions have also led to a reduced availability of relevant national staff, including facility operators, to support Agency inspectors in the performance of their duties. While the Agency was able to eventually gain cooperation from the States concerned, the impact of the delay in gaining access is still being assessed by the Agency at the State level and may require additional in-field verification effort and activities, including increased frequency and intensity of inspections in the second half of the year.

30. The Agency has also experienced a few cases in which its main interlocutors from States were not familiar with the obligations under their safeguards agreements, and had to be reminded that under no circumstances does any State have the right to suspend unilaterally the implementation by the Agency of its access and in-field verification activities provided for under relevant safeguards agreements and/or additional protocols. Nevertheless, such initial difficulties have since been largely resolved. The Agency will need increased cooperation and support from State authorities and operators in order, where necessary, to implement increased frequency and intensity of in-field verification activities in the coming months to ensure it will continue to meet its safeguards objectives.

31. Many State and Regional authorities (SRA) have continued to provide the Agency with the reports and declarations required under relevant safeguards agreements. Between 1 March and 31 May 2020 the Agency has received 166 nuclear material accountancy (NMA) related reports. In return, the Agency has provided feedback (or addressed) to the State or regional authorities: 75 summary letters and 119 acknowledgment letters. The Agency provided States with semi-annual book inventories and transit matching statements (59 original letters and attachments). The Agency has been informed by one State that they have not been able to provide their declarations due to local work/travel restrictions. The Agency is currently assessing the impact of these delayed submissions.

32. Outcomes as a result of support from Member States on the Department's Development and Implementation Support (D&IS) Programme for 2020/2021 are expected to be largely unaffected and will remain on schedule. However, approximately one quarter of these programmes may experience a delay or may be otherwise impacted by COVID-19 due to the requirement of in-person meetings, training or in-field testing that is not currently available.

## **G. Conclusion**

33. At the outset of the pandemic, the Director General stated that, despite the difficult situation, the Agency's verification activities would not be interrupted, and the Agency has, in fact, continued to implement safeguards effectively during the COVID-19 pandemic. The Agency currently assesses that it will be able to draw soundly-based safeguards conclusions at the end of the year for all States, providing that it continues receiving all necessary cooperation and support from those States. This preliminary assessment is made on the assumption that the pandemic situation will continue to steadily improve in the second half of 2020. Despite the difficulties, the Agency has effectively adapted itself to the new circumstances, focused its effort on the most critical safeguards activities, both in the field and at Headquarters, took a series of immediate actions, and introduced a number of remedial and mitigating measures. Nevertheless, any postponement of the relaxation of the COVID-19-related restrictions and measures, or their subsequent re-imposition by States would, naturally, require the Agency to reassess the impact on safeguards implementation. The Agency will continue to rely on the essential cooperation of States to implement safeguards, including to support any increase in the frequency and intensity of planned activities for the remainder of 2020. The Agency will continue to monitor the situation and provide timely updates on developments, as necessary.